

CLAIMS

What is claimed is:

1. A reflective assembly for use in an antenna for receiving incident
5 microwave signals, comprising:
a first reflective surface; and
a plurality of reflective surfaces positioned successively adjacent the first
reflective surface,
each reflective surface having a focal point and focal length relative to the first
10 reflective surface, wherein one or more of the reflective surfaces are translated about
one or more common axes, resulting in an offset of the focal point of one or more of
the reflective surfaces relative to that of the first reflective surface,
whereby the microwave signals reflected by each reflective surface arrive at
the focal point for the particular reflecting surface in-phase with the microwave
15 signals reflected by the other reflective surfaces.
2. The assembly of claim 1 wherein the focal length of each reflective
surface differs by λ or multiples of λ from the focal length of each
directly adjacent reflective surface.
- 20 3. The assembly of claim 1 wherein the upper edges of the first reflective
surface and that of the plurality of adjacent reflective surfaces are parallel.

4. The assembly of claim 1 wherein each reflective surface is a parabolic curve.
- 5 5. The assembly of claim 1 wherein each reflective surface is an elliptical curve.
6. The assembly of claim 1 wherein each reflective surface is circular or spherical.
- 10 7. The assembly of claim 1 wherein the upper edges of one or more of the reflective surfaces are not parallel.
8. The assembly of claim 1 wherein one or more of the reflective surfaces includes a slope, wherein the slope of one or more reflective surfaces may vary across the cross section of the respective surface.
- 15 9. The assembly of claim 1 wherein each reflective surface includes a depth, wherein each reflective surface has a depth adjusted to $n(\lambda)$ or $n(\lambda/2)$.
- 20 10. The assembly of claim 1 wherein the focal points of one or more of the respective reflective surfaces are different.

11. The assembly of claim 12 wherein the focal point of the respective reflective surfaces may be adapted to minimize reflected radiation interaction between adjacent reflective surfaces.

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12. The assembly of claim 12 wherein the focal point spacing is offset on one or more axes.

13. The assembly of claim 1 wherein the reflective assembly is formed of
10 metal, metalized plastic or a material laminated with a reflecting material.

14. The assembly of claim 13 wherein the reflective assembly is formed of aluminum.

15 15. The assembly of claim 14 wherein the reflective assembly is formed of stamped or cast aluminum.

16. The assembly of claim 13 the reflective assembly is formed as one or more sections.

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17. The assembly of claim 13 wherein the reflective assembly is compact, folded, and shaped to fit the intended use of the application.

18. The assembly of claim 1 wherein the reflective surfaces are formed as one or more sections.

19. A reflective assembly for use in an antenna for receiving incident
5 microwave signals, comprising:

a first reflective surface;

a plurality of reflective surfaces positioned successively adjacent the first
reflective surface, wherein each reflective surface is configured to reflect incident
radiation in-phase such that microwave signals reflected by each reflective surface
10 arrive at a common focal point in-phase.